

Augustus Lushington, Class of 1897

By Alice S. Weiss, V'84

There was no way my daughter looked like Phillis Wheatley, but her fourth-grade classmates were convinced. Lena was impersonating the eighteenth-century poet during her school's African American history month. I thought back to when I was in fourth grade, and my mind drew a blank. I don't remember being taught any African American history—ever. My daughter Lena's class was learning about all kinds of African American leaders and heroes, and I wondered about African American veterinarians.

I went to Penn in the early 1980s, and I might as well state right now that tolerance in my class, and in the School generally, was—well, it just wasn't there. It's impossible to say exactly who among the students opposed women and minorities, but a little intolerance went a long way. Many of my classmates were from areas with no diversity whatsoever, and some of them had trouble accepting anyone unlike themselves. Gay veterinary students were intimidated, even those who thought themselves inconspicuous. Women students were also harassed. I didn't know what it was like for the very few African American students at the School until a moment in the mailroom when an African American classmate pulled out the contents of her mailbox: class notes, flyers to campus fundraisers, and an astounding stack of hate mail—ugly racial slurs sprawled in dark ink. I asked her if she had taken the letters to the proper School authority and she laughed. The attitude of the School back then was to tough it out. So she did.

I never forgot that stack of hate mail. I wondered about the experience of other African American veterinarians. My daughter's assignment had started me thinking about the history of African American vets. I was curious. Who was the first? The Internet offered an answer. An old photograph popped up on screen. It depicted an impeccably dressed handsome young man staring off into the distance. Although the photo was faded, with

some rips and white spots, the man was very much in focus. He wore spectacles and had a mustache, which gave his young face an air of maturity. His name was Augustus Nathaniel Lushington. The caption said he had graduated from Penn in 1897! More names appeared on the screen: "Drucilla Moultrie" and a museum in Lynchburg, Va., but that was it. I was stuck, until I thought outside the Net.

From directory assistance I got telephone numbers for the museum and Drucilla Moultrie. After I dialed the museum, the voice on the other end of the phone, with its soft Southern accent, answered, "Oh yes, we know Dr. Lushington. Would you like to speak to his daughter? She is right here." I apologized to the woman; I must have the wrong number. I was interested in finding out information about a Dr.

Lushington who graduated from Penn's Veterinary School in 1897. "Oh yes, there is no mistake," the voice giggled. "His daughter is 100 years old. She is right here. Hold on." I was stunned. Another voice came on the phone. "Hello? Hello?" I'm not sure what I said, because my mouth wasn't working, but I did manage to ask a few simple questions. "Oh yes, my father graduated from veterinary school in 1897. I can tell you about him. Why don't you come on by to Lynchburg and see me?" So I did.

Now I'm not stupid—I mean, I did finish veterinary school—so I know when I need my mother. She is a brilliant interviewer and would be able to take over when my mouth failed me. Just thinking about meeting the daughter of this long-ago vet had me awestruck. I called my mom and asked her to meet me and head on South. So she did.

My mother was perfectly relaxed during the trip down to Lynchburg; figuring one of us needed to stay sane, I didn't tell her how paranoid and out of place I felt, too much of a Jewish city girl in a small-town space. Thankfully, my anxiety was gradually eased by good old Southern hospitality. By the time we walked into Drucilla Moultrie's room, my discomfort was entirely gone. A caretaker sat next to Mrs.

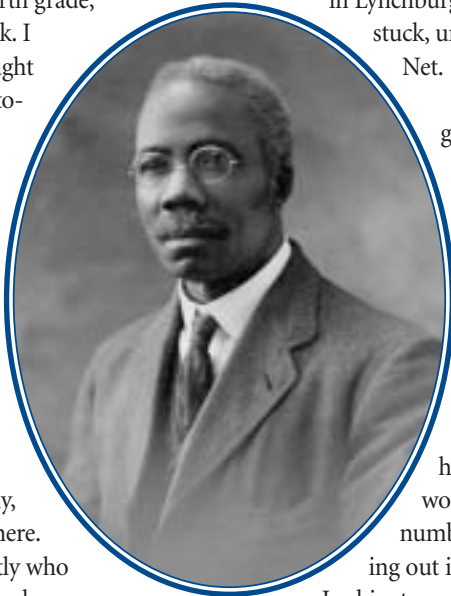
Moultrie, and it took me a while to tell which lady was 100 and which was 65. It wasn't that the caretaker was in poor shape, it was just that Mrs. Moultrie was in amazing condition. My mom and I visited for two days. We looked through scrapbooks and pictures. We listened to stories. We went to the local museum and to the graveyards where the Lushingtons were buried.

Augustus Nathaniel Lushington was born in 1869, in Trinidad, an island that is part of the West Indies. In the mid- to late 1800s, Trinidad was becoming overpopulated, especially with people of color. Many Africans, like Dr. Lushington's grandparents, had been brought to the island as slaves to work the sugar plantations. Now the plantations were drying up and the government was encouraging their workers to leave.

Slavery had been abolished in Trinidad in the early 1800s, much earlier than in the States, and every Trinidadian, regardless of ethnicity, was guaranteed an education. Still, life was not easy for former slaves and their families, especially with so few jobs available. Augustus Lushington, or Gus as he was called, finished school with good enough grades to be a

teacher, taught school for a few years, but then set off to South America to pursue one of his first loves—trains. After a short time, however, he returned to Trinidad for a visit, said goodbye to his parents for a second and last time, and went to the United States in the pursuit of higher education.

In 1889 it was not easy for everyone in America to move above their stations, especially a dark-skinned religious Episcopalian West Indian with a lilting accent—but Augustus Lushington came anyway. A network of other West Indians reached out to him, introduced him to his future wife, and helped him with his education. Gus took premedical and agricultural courses at Cornell University before he enrolled at Penn's Veterinary School in 1894.



Drucilla Moultrie

Finishing vet school in three years, he took himself and his wife to Virginia. Mrs. Moultrie remembered a lot about her dad and his life but many empty spaces existed as well. She had no idea what the veterinary school experience was like for her father and she didn't know why he decided to pursue his career in the South.



Dr. Lushington and family members.

Some of the holes were patched by talking to local historians. Lynchburg was a major, bustling city in the late nineteenth century, a hub of railroad lines

surrounded by prosperous farms. Schools were segregated, but they existed for both black and white children. Gus found a job teaching at a boys' agricultural school on the outskirts of Lynchburg, and later moved into town to start his veterinary practice.

Dr. Lushington practiced large animal medicine. In those days, not many families had indoor pets; a few wealthy people had cats and dogs, but most people had enough trouble putting food on the table for their families, without having to worry about feeding a pet besides. Mrs. Moultrie remembered a dog and a few cats that hung around their home, but they were not allowed inside. The animals in their lives were predominantly working animals: a cow for the milk and a horse for the ride. Only one other veterinarian practiced in the area, so Dr. Lushington had plenty of work. Nevertheless, he took on a number of other jobs. He served as a government meat inspector and worked as a probation officer on weekends.

My mother and I were stunned by his reason for taking all these jobs. His daughter explained that although her dad had many large farm clients, they rarely paid him. Her father could not demand payment, but he also could not refuse to go to those farms, which sometimes involved walking miles in the dark through wooded hills. Dr. Lushington took the additional jobs to keep his home and family

going. His daughter said she remembered him as always working and rarely home. After many years, Dr. Lushington did assume some small animal work. He worked right up until his death in 1939, at the age of 69 years. He was well respected as a doctor in his African American community and he was honored posthumously by the University of Pennsylvania, thanks in part to another African American veterinarian, William Waddell, who wrote a book about early African American leaders.

After I returned from the Virginia trip, I visited the National Library of Medicine to learn about veterinary medicine in the 1800s. A librarian helped, not with a book but with another librarian, Dr. Philip Teigen, whose specialty was, of all things, the history of veterinary medicine. I told him I was looking into the story of the first African American veterinarian, Dr. Nathaniel Lushington. "Well there were other African American vets before Dr. Lushington," Dr. Teigen informed me. I sighed before I politely corrected him, "No, Dr. Lushington was the first African American vet. He graduated from the first American veterinary school, at the University of Pennsylvania." In the next ten minutes, Dr. Teigen gave me more information than I had gathered in the previous four months. He told me that Penn was among the earliest vet schools still in existence today, but it was not the first American veterinary school. After the Civil War the veterinary profession became a prestigious and vital calling. Why? The horse. Horses were everywhere, hundreds of horses per city mile, and anyone who made a living from horses—farriers, feed lot owners, stable owners—did well.

No vet schools existed in the United States until the New York College of Veterinary Surgeons graduated its first students in 1867, but it didn't take long for the big universities to discover that a veterinary school would be an important addition to their institutions. Penn and Harvard rushed to be the first major university to establish a veterinary school. Harvard won, admitting its first students in 1883. It folded in 1901 because of the overabundance of veterinarians in the United States and Canada and because of its chronic financial problems. In 1889 Henry Stockton Lewis, an African American from Cambridge, Mass., graduated from the Harvard School of Veterinary Medicine. Dr. Stockton went on to practice in Chelsea, Mass. One of his many achieve-

One hundred and six years after Dr. Lushington's graduation, the 28 veterinary schools in the United States still struggle with low minority attendance rates, which stand in stark contrast with the racial makeup of the country. According to 2000 U.S. Census data, African Americans, Latinos, and Native Americans (minorities that have been traditionally underrepresented in higher education) constitute 25% of the U.S. population, but only between 6% and 7% of all veterinary students in the last five years.

A variety of explanations—some of them controversial—have been put forth as to why minorities are less inclined to pursue a veterinary education: due to economic pressures, minorities have less opportunities to own pets, lack exposure to veterinary medicine, have few veterinary role models, and prefer higher-paying careers in human medicine and pharmacology.* Some attribute the low minority attendance rates, in part, to recent legislative and judicial decisions, which have limited the use of special consideration of race and ethnicity in admissions decisions.

In any case, it is clear that more must be done to attract bright underrepresented minorities into the field. This fall, three African American women and one Latino woman entered Penn's Class of 2007—a small step, to be sure, but nevertheless one on which Penn hopes to build in order to contribute to the diversity of future generations of veterinarians.

S.I.F.

* "The Face of the Veterinary Profession," JAVMA, Vol. 222, No. 10, May 15, 2003.

ments was serving on the first veterinary registration board in Massachusetts.

So here was another African American pioneer. Here was another story to unfold. Was his journey more important than Dr. Lushington's because he graduated first? The more I thought about it, the more confused I became. A little research showed that Dr. Lewis's life seemed easier than Dr. Lushington's. He lived and prospered in Massachusetts,

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Improving Survival Rate of Cloned Mouse Embryos

by Steve Bradt

Scientists at the School have found a novel way to boost the paltry survival rate of cloned mammals: When two genetically identical cloned mouse embryos are combined, the aggregate embryo is considerably more likely to survive to birth.

The team reported the results in the October 1 issue of the *European Molecular Biology Organization Journal*.

“At the blastocyst stage, an early embryonic stage just prior to implantation, mouse clones typically have a much lower than normal number of cells,” says corresponding author **K. John McLaughlin**, Ph.D., assistant professor of Reproductive Physiology. “When we combined two clones at the four-cell stage, the embryos showed a remarkable improvement in viability, much greater than expected from the sum of their parts.”

Despite the successful cloning of sheep, pigs, cats, and most recently rats, mammalian cloning—in which an ordinary cell’s nucleus is transferred to an egg whose nucleus has been removed—remains remarkably inefficient. Of every 100 cloned mice, roughly one survives to birth.

The researchers found that when the clone hybrids were transferred back into the uteri of recipient mice, the survival rate jumped to 8 percent. The researchers even produced a litter of four cloned mouse pups, in stark contrast to the typical single pup born.

Cloning requires the precise genetic reprogramming of the nucleus inserted into an enucleated egg. This nucleus must abandon its former genetic program and adopt the genetic

profile of an embryonic nucleus; failure to do so dooms the embryo.

“The paper provides a new insight into reprogramming following nuclear transfer,” says Davor Solter, a developmental biologist at the Max-Planck Institute of Immunobiology who was not involved in this work. “It confirms indirectly that every cloned embryo is actually different and that reprogramming is random. It seems that two embryos that are epigenetically different can positively interact and complement each other, leading to correct temporal and spatial gene expression. That this type of interaction can take place was not obvious and it could only be demonstrated by the described approach.”

McLaughlin and his colleagues are not yet sure why the aggregation of cloned embryos boosts survival, although one theory is that the combination of two embryos helps compensate for genetic deficiencies in either.

“The genetic reprogramming of a cloned embryo never seems to occur with 100 percent accuracy,” McLaughlin says. “However, the group of genes that fails to reset properly differs in each individual embryo, meaning that each embryo

that contributes to an aggregate can help mask the shortcomings of the other. By combining cloned embryos, you might end up with an embryo that’s 99 percent reprogrammed rather than just 90 percent.”

When McLaughlin and colleagues cut wild-type mouse embryos in half, they found that the expression of key developmental genes was not affected, suggesting that the developmental deficiencies of cloned embryos are not due to low cell counts alone. They speculate that cells in a blastocyst may communicate in a way that is compromised in a smaller cloned embryo.

McLaughlin’s coauthors for the *EMBO Journal* paper include **Drs. Michele Boiani, Sigrid Eckardt, N. Adrian Leu, and Hans R. Schöler**—all of Penn’s Center for Animal Transgenesis and Germ Cell Research. Their work was funded by the Marion Dilley and David George Jones Funds, the Commonwealth and General Assembly of Pennsylvania, the National Institutes of Health, the University of Pennsylvania Research Foundation, and the United States Department of Agriculture.

Lushington

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which was a more tolerant state than Virginia, and stayed active in civic affairs most of his life. Dr. Lushington faced tremendous odds to become and practice as a veterinarian. His success can be measured in many ways. He was a veterinary doctor, and a parole officer, and a federal meat inspector. His community connections were strong: as a Mason, a deacon, and a member of the Chamber of Commerce. It was evident from spending time with Mrs. Moutrie that he was a wonderful, loving father who raised and educated two daughters, both of whom went on to prominence in the field of education.

Dr. Lushington and Dr. Lewis were at the forefront of the American veterinary profession, a field that is constantly changing. Until World War I, veterinarians were all men, and worked on large animals primarily. Today, the patients are predominantly pets, and women dominate veterinary classrooms. Over time, different animals and different animal diseases have changed how vets use their time and expertise. The Penn Veterinary School has sur-

vived these changes, which is an amazing economic feat. Penn’s administration is a model of tolerance, and there are support centers for students in crisis. The School has learned that alumni veterinarians will stay connected to Penn throughout their lives if their school experience has been welcoming and positive.

The School has reached out to embrace its past in many ways. One example is through the gallery of photographs in the lobby of the Gladys Hall Rosenthal Building. Some photos depict century-old veterinary classes, professors, and buildings. Occupying a prominent space in the lobby gallery is a black-and-white photograph from the 1890s of a well-dressed, bespectacled young man—the picture of Dr. Lushington that I first saw on the Internet. With the placement of his photograph in the lobby, Dr. Lushington, one of our most distinguished alumni, now welcomes all who enter our School.

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Pfizer Animal Health Gift

Pfizer Animal Health donated funds for the purchase of a plasma screen to be installed in one of the School’s Multidisciplinary Laboratories. This will greatly enhance the teaching of histology and histopathology during rounds as images can be projected onto the screen from a microscope. These images are superior to those seen through a multihead scope and will provide students with more information.